

**In the United States Patent and Trademark Office**

Application No.: Not Yet Assigned  
Filed: Herewith  
Title: DEVICE BASED ON COATED NANOPOROUS STRUCTURE  
Applicant: Brian M. Sager  
Examiner: Not Yet Assigned  
Art Unit: Not Yet Assigned

Express Mail Label # EF084591358US

Mailed 2/19/2004  
Fremont, CA

**Information Disclosure Statement**

Commissioner of Patents and Trademarks  
Washington, District of Columbia 20231

Dear Sir or Madam:

Attached is a completed Form PTO-1449 and copies of the pertinent parts of the references cited thereon.

It is requested that the document(s) on the enclosed form be made of record. As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

It is requested that the document(s) on the enclosed form be made of record.

**Part I (Authority)**

This statement is filed pursuant to:

☒ 37 C.F.R. § 1.97(b).

This information disclosure statement is filed either (1) within three months of the filing date of the national applications; (2) within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application; (3) before the mailing date of a first office action on the merits; or (4) before the mailing of a first Office action after the filing of a request for continued examination under § 1.114, whichever event occurs last.

Accordingly, this information disclosure statement requires no fee and no certification.

☐ 37 C.F.R. § 1.97(c).

This information disclosure statement is filed after the period specified in 37 C.F.R. § 1.97(b), but before the mailing date of either (1) a final action under 37 C.F.R. § 1.113 or (2) a notice of allowance under 37 C.F.R. § 1.311.

Accordingly, this information disclosure statement requires either the fee specified in 37 C.F.R. § 1.17(p) for submission of an information disclosure statement under 37 C.F.R. § 1.97(c) (\$180), or a certification according to 37 C.F.R. § 1.97(e).

☐ 37 C.F.R. § 1.97(d).

This information disclosure statement is filed after the period specified in 37 C.F.R. § 1.97(c).

Accordingly, this information disclosure statement requires the petition fee specified in 37 C.F.R. § 1.17(p) to consider an information disclosure statement under 37 C.F.R. § 1.97(d) (\$180) and a certification according to 37 C.F.R. § 1.97(e).

**Conditional Petition**

It is respectfully requested that this information disclosure statement be considered, good cause being presented in Part III herein (certification). Please treat this paper as the required petition.

If this statement crosses in the mail with an office action, or is otherwise not in the indicated category of 37 C.F.R. § 1.97, it is respectfully requested that this statement be treated in the next appropriate category and made of record.

To the extent required, please treat this paper as a conditional petition for acceptance of the information disclosure statement.

## Part II (Payment)

A check is enclosed as indicated:

- ☒ No fee is due.
- ☐ The fee specified in 37 C.F.R. § 1.17(p) for submission of an information disclosure statement under 37 C.F.R. § 1.97(c) is enclosed (\$180).
- ☐ The petition fee specified in 37 C.F.R. § 1.17(p) to consider an information disclosure statement under 37 C.F.R. § 1.97(d) is enclosed (\$180).

## Part III (Certification)

Pursuant to 37 C.F.R. § 1.97(e), I certify:

- ☒ No certification is necessary.
- ☐ (1) Each item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the statement.
- ☐ The "communication from a foreign patent office" referred to in the certification is an International Search Report, possibly issued by the U.S. Patent and Trademark Office in its capacity as an International Search Authority or International Preliminary Examining Authority.
- ☐ The "counterpart foreign application" referred to in the certification corresponds to an ancestor or descendent application of the application for which this information disclosure statement is filed.
- ☐ (2) No item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c), more than three months prior to the filing of the statement.

## Part IV (Additional Statement)

An additional statement regarding these items of information ☐ is, ☒ is not, enclosed.

Copies of the cited art references M-X ☒ are enclosed,

Copies of the cited art references \_\_\_\_\_ ☐ are of record in parent application Serial No. \_\_\_\_\_ and will be provided if the Examiner deems it convenient.

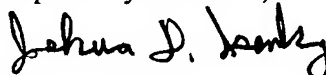
Copies of the cited art references A-L ☒ are not required under 37 CFR 1.98(a)(2)(i) because they are U.S. Patents and/or U.S. Patent Publications and

☒ the present application was filed after June 30, 2003, or

☐ the present application is an international application that entered the national stage under 35 USC 371 after June 30, 2003.

Dated: Feb. 19, 2004

Respectfully submitted,



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FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE	ATTY. DOCKET NO. <b>NSL-024</b>	SERIAL NO. <b>Not Yet Assigned</b>
<b>LIST OF PRIOR ART CITED BY APPLICANT</b> (Use several sheets if necessary)	APPLICANT <b>Brian M. Sager</b>	
	FILING DATE <b>Herewith</b>	GROUP <b>Not Yet Assigned</b>

<b>OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>		
	<b>T</b>	Yunfeng Lu, Rahul Ganguli, Celeste A. Drewien, Mark T. Anderson, C. Jeffrey Brinker, Weiland Gong, Yongxing Guo, Hermes Soye, Bruce Dunn, Michael H. Huang & Jeffrey I. Zink. 1997. "Continuous formation of supported cubic and hexagonal mesoporous films by sol-gel dip-coating," Nature 389, 25 September 1997.
	<b>U</b>	L. Schmidt-Mende, A. Fechtenkotter, K. Mullen, E. Moons, R. H. Friend, J. D. MacKenzie. 2002. Self-Organized Discotic Liquid Crystals for High-Efficiency Organic Photovoltaics. Science 293, 1119-1122
	<b>V</b>	Wendy U. Huynh, Janke J. Dittmer, A. Paul Alivisatos. 2002. Hybrid Nanorod-Polymer Solar Cells. Science 295, 2425- 2427
	<b>W</b>	Thuc-Quyen Nguyen, Junjun Wu, Vinh Doan, Benjamin J. Schwartz, Sarah H. Tolbert. "Control of Energy Transfer in Oriented Conjugated Polymer-Mesoporous Silica Composites" Science vol. 288, pp 652-656, 2000
<b>EXAMINER</b>		<b>DATE CONSIDERED</b>

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE				ATTY. DOCKET NO. NSL-024		SERIAL NO. Not Yet Assigned	
LIST OF PRIOR ART CITED BY APPLICANT (Use several sheets if necessary)				APPLICANT Brian M. Sager			
				FILING DATE Herewith		GROUP Not Yet Assigned	
<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A	5,482,570	1/9/1996	Saurer et al.	136	255	6/22/1994
	B	6,270,846	8/7/2001	Brinker et al.	427	385.5	3/2/2000
	C	6,340,789	1/22/2002	Petritsch et al.	136	263	9/15/2000
	D	6,278,056	8/21/2001	Sugihara et al.	136	263	3/18/1999
	E	5,525,440	6/11/1996	Kay et al.	429	111	11/2/1993
	F	2002/0134426A1,	09/26/2002	Chiba et al.	136	263	1/29/2002
	G	2002/0017656A1	02/14/2002	Graetzel et al.	257	184	7/30/2001
	H	5,674,325	10/7/1997	Albright et al.	126	250	6/7/1995
	I	5,986,206	11/16/1999	Kambe et al.	136	263	12/10/1997
	J	5,990,415	11/23/1999	Green et al.	136	255	12/8/1995
	K	6,075,203	6/13/2000	Wang et al.	136	256	5/18/1998
	L	6,291,763 B1	9/18/2001	Nakamura, Shigeru	136	256	4/5/2000
<b>FOREIGN PATENT DOCUMENTS</b>							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
	M	EP1028475 A1	8/16/2000	Europe	H01L	51/20	EP1028475 A1
	N	EP1087446 A2	3/28/2001	Europe	H01L	31/0352	EP1087446 A2
<b>OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
	O	M.A. Cameron, et al. "Atomic layer Deposition of SiO <sub>2</sub> and TiO <sub>2</sub> in Alumina Tubular Membranes: Pore Reduction and Effect of Surface Species on Gas Transport" in <i>Langmuir</i> 2000, Vol 16, pp. 7435-7444, Published on web June 10, 2000, American Chemical Society, Washington, DC.					
	P	Gebeyehu, D., Brabec, C.J., Saricifti, N.S., Vangeneugden, D., Kiebooms, R., Vanderzande, D., Kienberger, F., and H. Schnindler. 2002. "Hybrid Solar Cells based on dye-sensitized nanoporous TiO <sub>2</sub> electrodes and conjugated polymers as hole transport materials. <i>Synthetic Metals</i> 123, 279-287.					
	Q	Hongyou Fan, Yunfeng Lu, Aaron Stump, Scott T. Reed, Tom Baer, Randy Schunk, Victor Perez-Luna, Gabriel P. Lopez & C. Jeffrey Brinker, "Rapid prototyping of patterned functional nanostructures", in <i>Nature</i> vol 405, pp 56-60, 2000					
	R	M. Huang, et al. "Ag nanowire formation within mesoporous silica", in <i>Chemical Communications</i> , 2000, pp. 1063-1064, Royal Society of Chemistry					
	S	Alan Sellinger, Pilar M. Weiss, Anh Nguyen, Yunfeng Lu, Roger A. Assink, Weiliang Gong & C. Jeffrey Brinker. 1998. Continuous self-assembly of organic-inorganic nanocomposite coatings that mimic nacre. <i>Nature</i> 394, 256-260.					
<b>EXAMINER</b>				<b>DATE CONSIDERED</b>			
* <b>EXAMINER:</b> Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							